

ABSTRACT OF THE DISCLOSURE

A method and apparatus for scheduling the transfer of data bursts in a network comprising electronic edge nodes interconnected by bufferless core nodes are disclosed. Each edge node comprises a source node and a sink node, and each core node comprises several

5 bufferless space switches operated in parallel. Each source node is connected to at least one core node by an upstream link that includes multiple upstream channels. Each core node is connected to at least one sink node by a downstream link that includes multiple downstream channels. Any of the space switches can have either an electronic fabric or a photonic fabric. Each space switch has a master controller, and one of the master controllers in a core node is

10 designed to function as a core-node controller in addition to its function as a master controller. Each master controller has a burst scheduler operable to compute a schedule for the transfer of data bursts, received from source nodes, to destination sink nodes.